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EXAMINER

ZERVIGON, RUDY

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1763

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/630,139
Filing Date: July 31, 2003
Appellant(s): BREITUNG ET AL.

MAILED
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GROUP 1700

Patrick S. Yoder
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 21, 2006 appealing from the Office action mailed August 15, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: Claims 1-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/449,975.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

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(8) Evidence Relied Upon

6110540

COUNTRYWOOD

8-2000

US 20040237888 A1, Codella, Peter Joseph et al., December 2, 2004

(9) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

Double Patenting

Claims 1-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/449,975. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of copending Application No. 10/449,975 thermally/electrically isolate a light transmission portion but does not similarly thermally/electrically isolate a process gas transmission portion.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the same isolation means as claimed by copending Application No. 10/449,975 to gas transmission.

Motivation to apply the same isolation means as claimed by copending Application No. 10/449,975 to gas transmission is to thermally and electrically isolate the process gasses for preventing premature reaction(s).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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Claim Rejections - 35 USC § 102

Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Countrywood; Joseph et al. (US 6,110,540 A). Countrywood teaches a delivery device (Figure 3B; column 6; line 34 - column 6, line 23) for a thin film deposition or etching apparatus (Figure 1; column 6; lines 35-48), comprising: a heated gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) for delivering a gas (120; Figure 3B) to a powered electrode (18; Figure 1,3B; column 6; line 34 - column 6, line 23) of the apparatus (Figure 1; column 6; lines 35-48), the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) maintained under a vacuum (16; Figure 1; column 4; lines 34-49); and a coupling device (110; Figure 1; column 7; lines 15-23) located between the powered electrode (18; Figure 1,3B; column 6; line 34 - column 6, line 23) and the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23), the coupling device (110; Figure 1; column 7; lines 15-23) comprising insulation portion ("ceramic elements 110"; Figure 1; column 7; lines 15-23), as claimed by claim 1

Countrywood further teaches:

- i. The device of claim 1, wherein the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) is directly connected to the coupling device (110; Figure 1; column 7; lines 15-23), as claimed by claim 2
- ii. The device of claim 2, wherein the coupling device (110; Figure 1; column 7; lines 15-23) is directly connected to the powered electrode (18; Figure 1,3B; column 6; line 34 - column 6, line 23), as claimed by claim 3

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- iii. The device of claim 1, wherein the thin film deposition or etching apparatus (Figure 1; column 6; lines 35-48) comprises a PECVD apparatus (Figure 1; column 6; lines 35-48), as claimed by claim 4
- iv. The device of claim 1, wherein the insulation portion ("ceramic elements 110"; Figure 1; column 7; lines 15-23) is both thermally and electrically insulating, as claimed by claim 5
- v. The device of claim 1, wherein the insulation portion ("ceramic elements 110"; Figure 1; column 7; lines 15-23) comprises a plastic or a ceramic material, as claimed by claim 6
- vi. The device of claim 3, wherein the coupling device (110; Figure 1; column 7; lines 15-23) further comprises a flange (outer portion of 110, not labeled; Figure 3B) for maintaining the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) under a vacuum (16; Figure 1; column 4; lines 34-49), claimed by claim 7
- vii. The device of claim 7, wherein the flange (outer portion of 110, not labeled; Figure 3B) is connected to the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23), the insulation portion ("ceramic elements 110"; Figure 1; column 7; lines 15-23) is connected to the powered electrode (18; Figure 1, 3B; column 6; line 34 - column 6, line 23), and the insulation portion ("ceramic elements 110"; Figure 1; column 7; lines 15-23) and flange (outer portion of 110, not labeled; Figure 3B) are connected to each other, as claimed by claim 8
- viii. A delivery device (Figure 3B; column 6; line 34 - column 6, line 23) for delivering a gas (120; Figure 3B) to a thin film deposition or etching apparatus (Figure 1; column 6; lines 35-48), the system comprising: a heated gas (120; Figure 3B) inlet line (conduit for gas

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from 120; Figure 3B; column 6; line 34 - column 6, line 23) maintained under a vacuum (16; Figure 1; column 4; lines 34-49); and a coupling device (110; Figure 1; column 7; lines 15-23) located between a powered electrode (18; Figure 1,3B; column 6; line 34 - column 6, line 23) of the apparatus (Figure 1; column 6; lines 35-48) and the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23), the coupling device (110; Figure 1; column 7; lines 15-23) comprising thermal and electrical insulation portion (" ceramic elements 110"; Figure 1; column 7; lines 15-23), as claimed by claim 9

- ix. The device of claim 9, wherein the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) is directly connected to the coupling device (110; Figure 1; column 7; lines 15-23), as claimed by claim 10
- x. The device of claim 10, wherein the coupling device (110; Figure 1; column 7; lines 15-23) is directly connected to the powered electrode (18; Figure 1,3B; column 6; line 34 - column 6, line 23), as claimed by claim 11
- xi. The device of claim 9, wherein the electrical insulation portion (" ceramic elements 110"; Figure 1; column 7; lines 15-23) comprises a plastic or a ceramic material, as claimed by claim 12
- xii. The device of claim 11, wherein the coupling device (110; Figure 1; column 7; lines 15-23) further comprises a flange (outer portion of 110, not labeled; Figure 3B) for maintaining the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) under a vacuum (16; Figure 1; column 4; lines 34-49), as claimed by claim 13

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- xiii. The device of claim 13, wherein the flange (outer portion of 110, not labeled; Figure 3B) is connected to the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23), the insulation portion (" ceramic elements 110"; Figure 1; column 7; lines 15-23) is connected to the powered electrode (18; Figure 1,3B; column 6; line 34 - column 6, line 23), and the insulation portion (" ceramic elements 110"; Figure 1; column 7; lines 15-23) and flange (outer portion of 110, not labeled; Figure 3B) are connected to each other, as claimed by claim 14
- xiv. A PECVD apparatus (Figure 1; column 6; lines 35-48) containing a delivery system, the system comprising: a heated gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) maintained under a vacuum (16; Figure 1; column 4; lines 34-49); and a coupling device (110; Figure 1; column 7; lines 15-23) located between a powered electrode (18; Figure 1,3B; column 6; line 34 - column 6, line 23) of the PECVD apparatus (Figure 1; column 6; lines 35-48) and the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23), the coupling device (110; Figure 1; column 7; lines 15-23) comprising insulation portion (" ceramic elements 110"; Figure 1; column 7; lines 15-23) and flange (outer portion of 110, not labeled; Figure 3B) device for maintaining the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) under a vacuum (16; Figure 1; column 4; lines 34-49), as claimed by claim 15
- xv. The device of claim 15, wherein the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) is directly connected to the coupling device (110; Figure 1; column 7; lines 15-23) and the coupling device (110;

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Figure 1; column 7; lines 15-23) is directly connected to the powered electrode (18; Figure 1,3B; column 6; line 34 - column 6, line 23), as claimed by claim 16

- xvi. The device of claim 15, wherein the insulation portion (“ ceramic elements 110”; Figure 1; column 7; lines 15-23) is both thermally and electrically insulating, as claimed by claim 17
- xvii. The device of claim 16, wherein the flange (outer portion of 110, not labeled; Figure 3B) is connected to the gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23), the insulation portion (“ ceramic elements 110”; Figure 1; column 7; lines 15-23) is connected to the powered electrode (18; Figure 1,3B; column 6; line 34 - column 6, line 23), and the insulation portion (“ ceramic elements 110”; Figure 1; column 7; lines 15-23) and flange (outer portion of 110, not labeled; Figure 3B) are connected to each other, as claimed by claim 18

(10) Response to Argument

It is noted in advance that Applicant’s arguments do not address the Examiner’s rejection of claims 1-18 that remain provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/449,975. The Examiner’s below statements are in response to the sole arguments presented against the Examiner’s anticipation rejections.

Applicant states:

“

All of the independent claims recite, in generally similar language; a heated gas inlet line for delivering a gas to a powered electrode. Countrywood does not disclose or even suggest the

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claimed element of a heated gas inlet line. Instead, Countrywood only discloses a gas supply that is used in conjunction with the apparatus. See, e.g., Countrywood at column 4, lines 45-47; see also, column 4, lines 61-63; see also, column 5, lines 47-50.

“

In response, the Examiner disagrees. As stated repeatedly before, Countrywood indeed teaches a heated gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) for delivering a gas (120; Figure 3B) to a powered electrode (18; Figure 1, 3B; column 6; line 34 - column 6, line 23) of the apparatus (Figure 1; column 6; lines 35-48). In response to Applicant's new argument against Countrywood, is noted that although Countrywood teaches "cooling water" supplied through ports 122, 124, 126, 128, and 130 (Figure 3B; column 7; lines 15-23) the relative *temperature* of Countrywood's inlet line and Countrywood's plasma operating environment (Figure 1) may *operate* to heat Countrywood's inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) and is thus capable of being *heated* by passing water (not part of Countrywood's structure) at a slightly higher temperature than the ambient processing temperature of Countrywood's reactor (Figure 1). This *condition* is likely present during start-up of Countrywood's reactor (Figure 1). When the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent (In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977); MPEP 2112.01).

Further, because the relative temperatures of Countrywood's reactor (Figure 1) and Countrywood's gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6;

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line 34 - column 6, line 23) determine what is “heated” or “cooled”, the Examiner believes that such *process* limitations may amount to an intended use claim requirement.

Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02).

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Applicant states:

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It appears that the Examiner incorrectly interpreted the claim language and divided the single element of "a heated gas inlet line" into two separate elements. That is, the Examiner treated the claim as having "a heated gas" element, and "an inlet line" element. Clearly, this is not a reasonable interpretation of the claim language because "a heated gas inlet line" is not both "a heated gas" and "an inlet line". Furthermore, claim 1 establishes proper antecedent basis for the element by reciting "a heated gas inlet line for delivering a gas." See Application, claim 1, line 3 (emphasis added). Moreover, the disclosure states that "[t]he system 100 supplies inlet gases directly into the powered electrode 116 and allows heating of the entire gas inlet line 142 including in areas near the powered electrode 116." See *id.* at page 6, paragraph 19 (emphasis added).

“

In response, the Examiner has not incorrectly interpreted the claim language. In particular, any interpretation, including those suggested above by applicant, of "a heated gas inlet line" with respect to the disclosure of Countrywood remains anticipatory in view of Countrywood:

"a heated gas (120; Figure 3B) inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) for delivering a gas (120; Figure 3B)"

As a result, the Examiner's claim analysis of Countrywood is no more convoluted than any other interpretation. In other words, Countrywood's gas inlet line (conduit for gas from 120; Figure 3B; column 6; line 34 - column 6, line 23) can be *heated* by ports 122, 124, 126, 128, and 130 (Figure 3B; column 7; lines 15-23). See above rationale.

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Applicant states:

“

Additionally, the specification of the present application states the benefits of heating the entire gas line in order to eliminate cold areas between the showerhead and the gas inlet line. See, e.g., *id.* at pages 3-4, paragraph 10. Thus, basic claim construction, as well as the specification, would lead one skilled in the art to conclude that a heated gas inlet line is a single element and not two separate elements as interpreted by the Examiner.

“

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., “the specification of the present application states the benefits of heating the entire gas line”) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Rudy Zervigon, Primary Examiner, Art Unit 1763

Conferees:

Handwritten signature of Rudy Zervigon and the date 5/21/7.

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2/1/7

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